

A. Earth as a blackbody

A-1	$S_0 =$	$S_0 =$	W/m^2	0.6 pt
A-2	$T_E =$	$T_E =$	K	0.6 pt
A-3	$f(x) =$			0.4 pt
A-4	$x_m =$	$b =$	$\text{nm} \cdot \text{K}$	0.4 pt
A-5	$\lambda_{max}^S =$	$\lambda_{max}^E =$	nm	0.2 pt
A-6	$\gamma =$	$\gamma(\text{numerical}) =$		0.8 pt

B. The Greenhouse Effect

B-1	$T_E =$ $T_A =$	$T_E =$ $T_A =$	K K	1.0 pt
B-2	$\alpha =$	$\alpha(\text{numerical}) =$		1.6 pt
B-3	$T_E =$	$\epsilon(\text{numerical}) =$		1.0 pt
B-4	$\frac{dT_E}{d\epsilon} =$	$\delta T_E =$	K	0.8 pt
B-5	$\epsilon =$ $k =$	$\epsilon(\text{numerical}) =$ $k =$	$\text{W/m}^2\text{K}$	1.6 pt

B-6	(a)	(b) $\delta T_E =$ K	1.0 pt
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